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ORIGINAL COMMUNICATIONS.

BONWILL CROWNS.

BY R. M. CHASE, D. D. S., BETHEL, VT.

[Essay read before the Vermont State Dental Society.]

In attempting to say a few words on the method of inserting artificial crowns on the roots of crownless teeth, I do so not because I have anything particularly novel to bring forward as regards performing the operation, but because I am desirous of drawing attention to, and evoke opinions upon, a principle which seems to me both scientific and useful. Since it is our misfortune to see the walls of frail teeth, that have been filled and re-filled, crumble like old pieces of masonry, should we not give to our patients something better than patched-up crowns or partial sets of teeth? Is a crown built up with gold, amalgam, or cement, really artistic? True, it may be artistic manipulation which performed the operation, but the result is—what? Not a concealment but a conspicuous sign of the handiwork of man. Is the usefulness of our professional attainments so unworthy of public recognition that it must make a gold mine or junk-shop of our patients' mouths to have our art appreciated? By no means. We have only

an occasional patient who is vain enough to want a display of jeweled teeth.

The operation of inserting porcelain crowns, especially incisors upon the roots of teeth, is perhaps as old as any in dentistry. Elderly people, who remember our art in its infancy, often tell us that the first dental work they ever saw were teeth with wooden pegs driven into the jaw, meaning of course crowns inserted on the root with a wooden pivot. One of the oldest and most eminent men in our ranks told me some time since that the first operation he ever performed was inserting teeth by this method. There have been many methods advanced from time to time in this direction—some very good ones, but too complicated for the average practitioner. No method has been accepted as practical and been brought into general use for all cases and conditions, until the advent of the so-called Bonwill crowns; and to convince you of this assertion, I have only to state that since Dr. Bonwill's article appeared in the August number, 1880, of the "Cosmos," from that time up to January, 1882, a space of seventeen months, 2,500 crowns were sold! They are supplied to us (thanks to the manufacturers) in almost endless variety, and for shape, color, and life-like appearance, they surpass all other artificial teeth extant. We can still improve them by grinding and shaping; also, when the original teeth were filled with gold, we can, with the aid of the diamond drill, make a cavity and insert a filling, which still further disguises the artificial look. Dr. Bonwill's first method of inserting crowns with bolt and nut failed to come into general use, not because it was very difficult to perform, but because it was not a practical method; and the time and expense attending the operation discouraged many from attempting it. His next step was barbed triangular wire. This was a great improvement on the former method, and accomplished good results, although the wire is inferior to the combination metal pins which are now furnished us, as it makes it necessary to cut away too much on the lateral sides of incisors. Besides, the pins are made of metal, which permits of the mercury amalgamating its surface, and it is absolutely stronger, being one solid body with the alloy. The combination metal is better in case of accident, for it can be drilled out very well compared to platinum or iridium, and the shape of the pins being much better adapted for fitting and strength than the wire.

In preparing the root for the reception of the pins and alloy, cut away as you would in fitting the old style pivot-tooth, so that the

joint will come if possible above the free margin of the gum, leaving the mouth of the root nearly flat. Then, with suitable drills and bur, enlarge the opening, remove all debris, and thoroughly cleanse the pulp canal by any means usually employed. Then fill the end or apex of the root with gold about one-third the length of it. This insures the root against an accumulation of gas. The root should be beveled at the mouth to correspond to the bevel in the crown. Make such under-cuts above the bevel in the canals as will thoroughly anchor the alloy in the root. The under-cuts in the crowns of incisors near the cutting edge anchor the pins in the face (labial), and its strength depends upon such anchorage. It is well to look at each crown with a glass to see if well under-cut in the incisors as well as bicuspids and molars, as some I find are not well made. In fitting the crown to the root, do not disturb the open mouth-bore, as it is specifically for holding the alloy in connection with the bevel in the root. Fit it as nearly flat upon the root as possible, leaving the margin as sharp as possible. The bevel in the crown and mouth of the root thus holds the alloy from slipping away from the pin, and makes it so dense when pressed home that there is no difficulty about displacement. Always remember to place the alloy in the root first, and after everything is in readiness for placing on the crown, force up a steel instrument large enough to allow the regular pin to be placed with a pair of forceps or pincers. Then tamp around it with a thin, flat-pointed instrument with biblious paper under the point of it—this serving to carry the alloy compactly. It is better to put most of the alloy on the root, and only enough in the crown to fill up around the head of the pin. By forcing on the crown you can see easily if there is too much or not enough of the alloy, and thereby take from or add to when necessary. Now, with a suitable adjuster, force the crown home. I may as well add here that adjusters are almost indispensable, as no crown can be put on and left at once without some such device, and one can not depend wholly on his fingers to accomplish this end. Having thus inserted the crown, ask your patient to call again on the next day, when you can burnish and finish the operation. If it is a bicuspid or molar, you can cut away some of the alloy and finish up with gold—this giving the operation a more perfected look to your patient and yourself. One more point is needful to remember in adjusting a porcelain crown: Look well to the occlusion. If the crown does not articulate with its opposite neighbor, the tooth is liable to come down a little and expose the point which impairs the beauty of

the operation, and it is much better for the health of the root to have it strike its opposite slightly.

I have given only a few points relative to performing this operation, as I did not think it necessary to enter into the small details, trusting you are all familiar with the several principles laid down by Dr. Bonwill. While it is a comparatively new departure, we can safely say it is a great boon to dental surgery.

DISKS.

Substantially as given before the American Academy of Dental Science, at the Fourteenth Annual Meeting, October 26, 1881.

BY HORATIO C. MERIAM, D. M. D., SALEM, MASS.

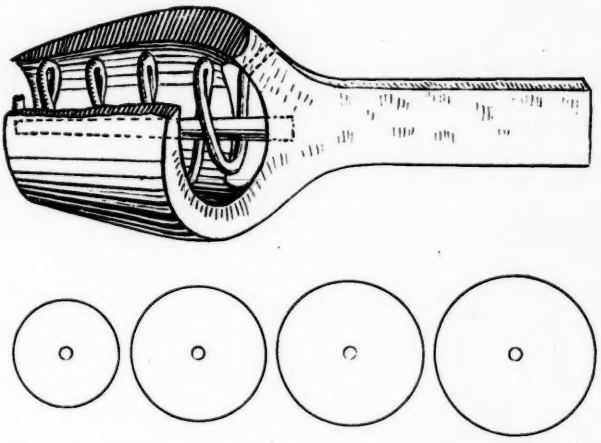
The request to publish the remarks made at the above meeting on Disks has made it necessary to write out what at that time I did not think needful to do—the matter being so entirely a practical one that I gave it without notes after reading my Essay, which was upon another subject. And I have added somewhat to that which I said then.

In bringing before you the Disks of sandpaper and other similar materials, I have first of all to disclaim any credit for them as first introduced—this belonging, as far as I know, to my ingenious colleague, Dr. C. A. Buxton, who brought them to my notice about two years ago, and who made them for his own use at a much earlier date, seven or eight years, I believe.

There were various objections to them, as made, that I have tried to overcome, and for these improvements I ask your attention.

The fact that they were not well centred does not seem to be much of a disadvantage, as we use them only on the sides. But the centres were merely pricked through when they should be cut out, that the disk may come up to a good bearing on the mandrel. This you will see has been done by the centre in the disk-cutter, which cuts out a distinct hole at the same time that it cuts a disk. The cutter or wad-punch of the gunsmith I have adapted for this purpose, by putting in a centre punch and spiral spring, to prevent the disks from working up this centre while cutting, and for throwing them out after. Should they still cling, however, a slight tap on the solid end of the punch will aid the spring to discharge them. The punch should be used with a mallet to avoid the spreading of the end, as would follow if a hammer were used.

I give these particulars that any one may make the cutter, or perhaps some of our manufacturers will do it for us. I get them so as to make disks of the sizes here shown.



The disks can be made of sandpaper, emery or glass paper, emery-rouge or crocus-cloth, or any material that may seem likely to polish or cut well. I have made some that are water-proof by putting quartz, very finely ground, of course, on to linen previously stiffened with shellac. But up to this time am not prepared to say how good they are. A coat of shellac on the cutting side of sandpaper makes them partially water-proof. I think, however, the profession can be trusted to improve in this matter until we get a flexible water-proof disk that will cut and polish.

The first step in the making of the disks I have here is to get from the carpenter or cabinet-maker a block, about the size of a sheet of sandpaper, of close-grained wood, made so that you cut on the ends, like a butcher's. This block should be beveled on the edges, that they may not be split off in use. On this the paper or cloth is tacked, smooth-side up. This is given repeated coats of shellac varnish. More than three a day are not given by mechanics who use it. About five coats will be found sufficient, if the varnish is of good body. One trouble found was, that in cutting from the sheet, the edges broke and were not firm. This was overcome by wiping the sheet over with sweet oil about ten minutes after it received the last coat of varnish, and cutting at once. We gain in this way a sheet covered with soft

varnish, but not sticky. The oil is also an aid in cutting, and the edges are compressed, wearing and cutting better. They should be allowed to season well after being cut before using.

The manner of use of these disks will of course be obvious to all, but until we give them a trial it is hard to understand their cutting capacity. They are very flexible and can be run at almost a right angle, and, with the end of an excavator, can be held so as to work on the rounding surfaces of teeth. For cavities in the labial surfaces of incisors, etc., I do not know of anything as good. If we wish to finish at the curvical wall without injury to the form of our filling, the butt end of an excavator can be held against the disk on the mandrel until the grit is worn off and we have an outer band or ring of cutting surface.

I would not consume the time of this society if I were not sure you would all be glad of what I have shown you, for all have been to whose attention I have brought them.

I have, of course, no interest in their sale—my only object being to give to the profession what I have perfected for myself.

April 5, 1882.

Under this date, I am glad to call attention to the first improvement. The Cutter is changed by Dr. Stevens, of Lynn, into a solid piece of steel turned out in a lathe so that there is no trouble from the springing of the centre in use. A thick rubber disk takes the place of the spiral springs. This is just the thing for making them, and it has the advantage that we can have them made of the best steel, whereas, the wad punches that I have seen are without exception inferior. They should be a little longer, I think, than those made by Dr. S.

EXTRACTS FROM MY NOTE BOOK.

BY GEO. L. PARMELE, M. D., D. M. D.

How often do we hear our patients exclaim, Oh, Doctor, I must manage to save my front teeth, just as if vanity could properly masticate their food.

* * *

I don't know how long Aromatic Sulphuric Acid has been used in the treatment of necrosis, but when last in Brooklyn, my friend, Chas. D. Cook, M. D., showed me a book in the library of the Kings

County Medical Society—the 6th edition of which was published in London in 1757—which recommended its employment in this disease. Its title is, "A General System of Surgery, by Laurence Heister, Professor of Physic and Surgery in the University of Helmstadt. 6th edition; London. 1757." Can any one quote an earlier date? I think there is an impression among members of the profession that its use is of more modern origin.

* * *

We are often hearing of large dental bills, but I think by far the largest amount I have ever seen recorded as being paid for the preservation of a set of teeth, is the case of a Jew in the time of King John, of England. At that time, in England, as now in some parts of Europe, the Jews were numerous, wealthy, and thought fair prey, as everybody hated them. In reading of the Regicides, Whalley, Goff and Dixwell, I found this little narrative, showing one of the ways King John had of raising money, also showing the value put upon teeth.

"A story is told of a rich Jew in Bristol who was ordered to pay ten thousand marks—about thirty-three thousand dollars—equivalent, at least, to three times as much at the present day. This he refused to do, and was sentenced to have one of his teeth knocked out each day till he complied. The executioner began with the double teeth, and took seven in as many days, when the victim could hold out no longer, and agreed to pay his money to save his teeth."—*Three Judges, by Israel P. Warren.*

Here we have a recorded case where ninety-nine thousand dollars was paid to save twenty-five teeth.

* * *

It is said of the same King John, that when the parchment containing the famous MAGNA CHARTA was handed him to sign, he cried out profanely, "Why do they not demand my crown, also? By God's teeth, I will not grant these liberties, which will make me a slave!"

* * *

The following incident concerning transplantation was written out for me by a descendant of the gentleman mentioned:

"Governor Thomas B——, of South Carolina, was a man of great ability, determination and promptness, the possessor of large wealth, and the owner of many slaves; distinguished also for his remarkable kindness in governing them, as never, under any circumstances, would he allow flagellation to be used. About the year 1817, his son, a lad

from twelve to fourteen years of age, fell over a large log-saw, and broke out one of his teeth. The tooth was the lateral incisor on the left side of the upper jaw. Before the roots of the fractured tooth had time to settle again, the governor called up his young negro slave, Henry, and purchased one of his incisors, which was immediately placed in position in his son's mouth. Henry was a light copper-colored Charleston negro, of about the same age as young B. Although the transplanted tooth was a trifle larger, it took naturally and kindly, occasioning no trouble of any description, but supplied the place well and serviceably. This tooth young B. wore probably as long as he lived."

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How aptly the following quotations from a newspaper article, entitled, "The Dangers of Poor Pay," apply to dentistry: "It is a safe general proposition that any sort of service or work, public or private, that should be done at all, should be paid its value. If it is not, one of two things invariably follows—either the service or work are not well performed, or payment is got surreptitiously, and these two cheats usually go together." . . . . "So long as cheap work is what people demand, there is no use in grumbling when the cheap products fail us. Whether it be dams or sewers, or houses that fall; or food that makes us sick; or bridges that break; or boats that go to pieces, it is all the same. To get the proper thing, a proper compensation must be given. Good engineers who charge fitly for their labor, and who do solid work, are derided by the ignorant and left often idle to sit by and watch the work of their inferiors crumble away."

The State Board of Health of Illinois does not recognize diplomas coming from the College of Physicians and Surgeons of St. Joseph, Mo.—*N. E. Med. Monthly.*

The *English Medical Press* gives the following warning: We are concerned in the interest of impressionable females, and weak-minded young men to notice the arrival in England of Messrs. Moody and Sankey, of explosive revival fame. Former experience of the pernicious influence of the hystero-religious mania with which these men were identified lead us to hope that most people will guard against any undue preponderance of the emotional passions.—*N. E. Med. Monthly.*

SELECTIONS AND ABSTRACTS.

AN INVESTIGATION INTO THE EFFECTS OF ORGANISM UPON THE TEETH AND ALVEOLAR PORTIONS OF THE JAW.

BY ARTHUR S. UNDERWOOD, M. R. C. S., L. D. S., ENG., AND W. J. MILLES, L. R. C. P. LOND., F. R. C. S. AND C.

Read before Section XII. of the International Medical Congress, August 6, 1881.

MR. PRESIDENT AND GENTLEMEN: Mr. Milles and myself approach with some diffidence the task of laying our views, in their infancy, before a body representative of science from all parts of the world. In the presence of so many illustrious members of our profession, whose own well-established researches have so materially advanced surgery in all its various departments, we should scarcely have ventured to address you without some apology or excuse; we have only one to offer, yet we think it is one you will all sympathize with and appreciate. It is a firm and rooted belief in the truth of our theory, and a hope, almost amounting to a conviction, that it will prove serviceable to humanity. Without further preface we will proceed to discuss it.

The effects of the presence of septic organisms in various parts of the body have been for some years the subject of vigorous discussion and inquiry. Up to the present time certain main facts have, we consider, been placed beyond doubt, and accepted by the general body of scientific men as incontrovertibly established. We shall therefore assume as axioms in our present inquiry, the main principles of the antiseptic theory. The object of our inquiry (undertaken some four years ago) has been to determine, as far as possible, to what extent germs are present in the dental tissues when in a state of disease, and to deduce conclusions as to the effects of their presence. The method we have pursued has been threefold:

1. *Microscopical*—The observation of numerous sections of morbid dental tissues, stained in such a manner as to render the germs plainly visible.

2. *Flask Experiments*—The exposure of dental structure in a healthy condition to the action of septic and aseptic fluids.

3. *Clinical Experiments*—The treatment of morbid conditions of the dental tissues with antiseptic agents.

The results of this threefold investigation have uniformly led us to the conviction that germs play an important part in the production

and maintenance of morbid conditions of the dental tissues. With regard to the principal calcified dental tissue, dentine, and its destruction by caries, it is necessary to allude, for a moment, to the most commonly received views of the etiology of the latter disease. The old "vital theory" may be passed over, as completely disproved by the successful experiments of M. Magitot and many others, who have produced caries in teeth not in connection with the living body. With regard to the purely chemical theory, we cannot accept it as wholly satisfactory, for the following reasons:

1. Because the destruction of dentine, effected by the action of acids alone, under aseptic conditions, does not resemble caries, either in color or in consistency, it being colorless and gelatinous, the process uniformly attacking all parts of the surface.

2. Because sections of dentine so destroyed show uniform destruction of the matrix, but not enlargement of the channels occupied by the fibrils; whereas, true caries first attacks the soft tissues, *i. e.*, the fibrils, and encroaches from that *point d' appui* upon the surrounding calcified structure, thereby producing the characteristic enlargement of the channels, until two channels break into one, the intervening matrix being wholly destroyed.

3. That, although artificial caries has been produced exactly resembling true caries, we have failed to discover any record of an experiment in which this has been the case when septic influences were excluded. Two experiments have, indeed, been recorded in which the teeth were protected from septic agencies, in one by the addition of creasote ("Tomes' Dental Surgery"), in the other by hermetic sealing of the flask, and in neither of these did caries occur. We assume, therefore, that two factors have always been in operation: (1), the action of acids; or (2), the action of germs. Further, our own flasks show that malic and butyric acids, with saliva in a meat infusion, have not, under aseptic conditions, produced caries.

It may be asked, if the tooth has been decalcified by acids out of the mouth, and these acids are constantly in action in the mouth, then if they produce caries, why can they not produce simple decalcification? To this it may be replied, that acids alone do not destroy a living tissue; that the stomach is not digested by its own acids until it has been removed from the body.

4. Lastly, we would urge that, when caries occurs in the mouth, it is always under circumstances more favorable to the action of germs than to that of acids. There is always, first of all, a minute pit or

haven where germs can rest undisturbed and attack the tissue. We cannot, upon the purely acid hypothesis, explain why the same acids that originally caused the decay, gaining access through some minute imperfection of the armor of enamel, do not in the same mouth, or under the same condition, attack the wounded enamel at the edges of the filling. The germs cannot rest there, they are constantly washed away if the surface is fairly smooth; but the acids literally bathe the part except during the performance of the act of mastication, when the alkaline parotid and submaxillary saliva neutralize their action.

These considerations led us to seek for signs of the presence of organisms in carious dentine, with results that far exceeded our expectations.

This theory—which, for the sake of distinction, may be called "septic"—is rather an amplification of the chemical theory than a contradiction of it. Most probably the work of decalcification is entirely performed by the action of acids, but these acids are, we think, secreted by the germs themselves, and the organic fibril upon which the organisms feed, and in which they multiply, is the scene of the manufacture of their characteristic acids which, in turn, decalcify the matrix, and discolor the whole mass.

From our observation of cementum to which caries has extended, we conclude that the process there is very similar; the bioplasmic contents of the lacunæ and canaliculi afford board and lodging for the organisms, which multiply, and when sufficiently numerous, decalcify the surrounding bone so that the lacuna loses its outline and extends in all directions.

With regard to the pulp, its inflammation does not materially differ from that of any other cellular connective tissue. The influence of germs upon such tissues, when inflamed, has been already demonstrated by Professor Lister. One peculiarity distinguishes this from kindred tissues, and that is that a tooth being an absolutely shut box, its contents are singularly amenable to antiseptic treatment. Having once rendered them aseptic by means of a penetrating agent, it is easy to keep them absolutely so by sealing the only opening of the cavity with a filling. With a view of testing this fact, the theoretical accuracy of which we could not doubt, we have repeatedly allowed the gangrenous contents of a pulp cavity in which suppurative inflammation has gone on, to remain in the tooth covered by a filling.

All that is necessary to prevent further disturbance is to soak them in a powerful antiseptic. I have chosen for this purpose a combina-

tion of iodoform and eucalyptus oil, because it is the most powerful and the most permanent in its effects. After a certain period, during which the cavity has been sealed with a temporary filling, if no disturbance has occurred, I have substituted a permanent filling, and almost invariably with the most satisfactory results. This treatment is, I think, eminently conservative surgery and based upon sound surgical principles.

M. Magitot, in a recent most interesting article upon the development of the teeth, lays great stress upon the fact that the odontoblast layer is very essential to the health of the tooth; and if we can, by this method of dealing with the matter, avoid the otherwise necessary alternative of removing it, together with all dead matter, we certainly give the tooth an extra chance. The more of the natural vital contents of the pulp cavity we can preserve *in situ*, the better for the tooth.

Further, we would propose for your consideration a theory as to what is the probable course of behavior of a tooth pulp under these circumstances—at present only a theory, but one which we hope to establish shortly by ocular demonstration, and lay before you in a mature form. Suppose a tooth, with a large cavity communicating with the pulp-chamber; suppose that gangrene and suppuration have extended down two-thirds of the pulp-chamber, and that the extreme periphery of the pulp (membrana eboris), and the contents of the apex of the root alone remain alive; suppose the cavity cleared, a small portion of the surface of the slough removed, and the rest carefully soaked with eucalyptus oil until all the existing organisms are destroyed, and the cavity then filled with a permanent and effectual stopping, what becomes of the slough? In every other part of the body a slough that has been rendered and kept aseptic is gradually absorbed by the neighboring vessels, while new cicatricial connective tissue is laid down in its place. This has been repeatedly demonstrated in sloughs of the limbs treated antiseptically. We therefore suggest that the same thing that happens in other parts of the body, under similar circumstances, happens in the pulp-chamber; the slough is removed gradually by absorption, while its place is supplied by healthy cicatricial tissue; like all scar tissue, it is of a lower order than that which it replaces, but it is a living tissue. After a lapse of time, then, we imagine that, if the tooth in question were extracted and split open, its contents would be found to be a healthy connective tissue, and not a slough at all.

Experiments on the Living Subject.—Taking, then, for granted the facts established by Lister and others, relative to the effects of the presence of organisms in other tissues, we were convinced that the course of an alveolar abscess was also profoundly modified by their presence. An aseptic or a septic alveolar abscess seemed to us to differ very much in the same way as a simple and a compound fracture.

To render such abscesses aseptic, we have injected them with eucalyptus oil and iodoform, and dressed them with lint soaked in these substances.

By means of constant and careful dressings and injections, we have been for the last two years very successful in inducing extensive and often oldstanding alveolar abscesses to run a rapid aseptic course of recovery. Wherever we have failed, we have been able to trace our failure to the presence of a sequestrum, which has afforded an inaccessible refuge for organisms, and which, until nature has rejected it, or surgical skill removed it, has kept up the mischief despite all applications. Mr. David Hepburn, in a recent able paper read before the Odontological Society, urged this fact very strongly and clearly, and we quite agree with him that, while dead bone is present, antiseptics may mitigate, but are powerless to annihilate the disease.

Microscopical.—The sections from which our observations have been made, have been cut from fresh teeth, very shortly after extraction, and without the use of any decalcifying or softening re-agent.

We have subsequently stained them with an aniline dye (methyl violet), following as closely as possible the process recommended by Koch—a process which renders micrococci fairly distinct under a $\frac{1}{8}$ lens, with proper illumination. A few typical slides we have been enabled to show you, owing to the kindness of our friend, Mr. Nelson. I need scarcely add that as the powers are very high oil immersions ($\frac{1}{60}$, $\frac{1}{32}$, $\frac{1}{25}$,) we shall ask you to refrain from touching the adjustments. We have also prepared some diagrams illustrating upon a larger scale the appearance of the objects. In dentine, which has occupied most of our attention, we have invariably discovered the channels containing the dentinal fibrils more or less infiltrated with germs—for the most part micrococci, oval and rod-shaped bacteria. These germs we find penetrating, at first in Indian file, then more thickly, along the course of the fibrils. As they accumulate and choke up the channels, they encroach upon the matrix, diminishing the distance between the fibrils until the matrix entirely disappears,

the neighboring channels join, and the whole tissue becomes one conglomerated mass of organisms. Beyond the sphere of visible decay, sections cut from apparently healthy tissue show here and there a narrow line of micrococci or bacteria, like an advance guard, and such isolated tubes or germs probably penetrate far into tissue which the naked eye would pronounce sound.

In decay which has appeared in blocks of hippopotamus ivory worn on a plate, we have observed very similar appearances, also in some caries which we have produced ourselves in a flask, by exposing a sound tooth to septic agencies.

In cementum hitherto we have experienced some difficulty in obtaining sections of tissue into which caries has penetrated; but where we have succeeded, we have found the lacunæ filled with germs. In some lacunæ, the protoplasm of the osteoblast cell is slightly stained, the nucleus very deeply, and a few germs are seen scattered about in little groups. In others, the protoplasmic contents of the space appear to have been totally destroyed, the outline lost, and the whole lacuna crowded with germs.

Summary.—The preceding observations, together with the experiments with flasks and upon the living subject above referred to, have led us to adopt certain views which may be regarded as an extension of the views previously held upon the matter.

1. We consider that caries is absolutely dependent upon the presence and prolification of organisms. That those organisms attack first the organic material, and feeding upon it, create an acid which removes the lime-salt, and that all the differences between caries and simple decalcification by acids is due to the presence and operation of germs. This view we propose to call the "septic theory."

2. That suppuration of the pulp and its sequelæ, such as alveolar abscess, depend also upon the successful working of organisms.

3. We feel justified in concluding that the successful exclusion of germs would prevent the disease, and that their exclusion is quite easy and practicable by the use of powerful and penetrating antiseptic agents, such as eucalyptus oil.

We have found that the space of time allotted to a paper rendered it quite impossible to enter into all the details of treatment and experiment we could have wished. These experiments have extended over three years, and cannot be condensed into a half-hour paper. All, therefore, that we have been able to do has been to lay before you the main facts and a few typical results, and in doing so we have been very kindly assisted by Mr. Nelson, whose microscopical arrangements have enabled us to show you our results in a more perfect manner than would have been otherwise possible.—*Journal of British Dental Association.*

EDITORIAL.

An "old New Englander," but now of Paris, writes us as follows regarding the *Journal:*

"I have received two numbers of the New England Journal, and very soon afterwards every word was read; although so young, it seemed like an old friend, and I took it to my heart at once. I most heartily congratulate you and your associates—the parents of this vigorous "offspring"—upon an issue, the excellence of which assures its brilliant future. It certainly raises its scientific head above ***all*** dental journals of to-day, and in ***no other*** respect can I see that it suffers in comparison with the best." . . . . "I have been in Paris five months, but the time seems very short, and I am enjoying myself much. January and February are the dull months, as people are all South, but the season is now getting lively." . . . "Our practice is composed mostly of Americans and English, but we see enough French to find that they are very bad patients as a rule, and French dentistry is worse than the patients. The worst operations, however, that I have seen, come from England. The self-sufficient 'John Bull' doubtless thinks he has done a wise thing in making requirements for the admission of foreign practitioners so severe. ***That,*** with their present ***fee*** system, is about as great a block to progress as could be used; for, to restrict a class superior to the one protected, is an imposition upon the public; and if the idea is to hasten progress by allowing only ***best*** men, it yet fails, for progress in conservative England is slow as regards the practice of professions, and I believe that about the poorest American that goes to England will produce better results than the average English dentist, with even a larger amount of ***unapplied*** science."

Dr. J. Chenon, of New York, found capsicum good in hemorrhages of the uterus; he gave a two-grain pill before every meal, increasing to six pills a day.—***N. E. Med. Monthly.***

Might it not be good in dangerous hemorrhages connected with dental operations?

We call attention to our "*Special Notice*" in the advertising columns this month. Very many, doubtless, who have not already become subscribers, have intended to do so, but for various reasons have delayed sending in their names. Let all such improve this opportunity, and send in their names and dollars at once.

Mr. Stephen Jenner, grand-nephew of the discoverer of vaccination, and himself in childhood the subject of many of his uncle's experiments, is living at the age of eighty-five, in great poverty at Heathfield, England.—*N. E. Med. Monthly.*

Here we have a genuine bad effect of vaccination. Let the anti-vaccination men rank this other bad effect among the great number (?) of diseases that result from vaccination—poverty! His health is so far undermined by vaccination-experiments that, at the age of eighty-five years, he cannot yet die!

We give this month a few more "Extracts" from Dr. Parmele's "Note Book." The "crumbs" that he has thus gathered up constitute quite a large volume, and our readers may expect from time to time entertaining "peeps" therein. We understand that the Dr. not only carries his *scissors* in his pocket, but his *pencil* as well, so as to be able to note, on the spot, any little incident or remark that he hears, or *clip* any item that comes to notice having a direct or indirect bearing upon dentistry. As a "*relish*" to go with some of the *scientific* meat, we deem them excellent.

The *New England Medical Monthly* is very severe on dentists who use chloroform where ether would be sufficient, and it seems to us with great justice. We remember very well that the then leading surgeon of the University of Munich, Dr. Nussbaum, said that he trembled every time he had to give chloroform. If we compare with this natural and reasonable dread of so dangerous a drug, the relative ease with which dentists administer it, we have, unfortunately, to think of the proverb in which it is said, that something is bliss when something is folly. A dentist should never administer chloroform without a thorough medical practitioner with him for cases of accident. The editor of the *Medical Monthly* thinks the only remedy against such careless handling of this dangerous drug would be to forbid by law the use of chloroform for dental operations, and, as we think, it might be done safely without too much discomfort to dentists and to patients.

RAMBLINGS AMONG THE JOURNALS.

The *Missouri Deutal Journal*, of February, 1882, opens with an address of Dr. J. Campbell, president of the St. Louis Dental Club. This address commences: "As this Club has inaugurated a new departure in dispensing with a code of ethics," etc. (!) The speaker, Dr. Campbell, makes the very sensible distinction between mechanical dentistry and medico-surgical dentistry, and says that at least five-sixths of a dentist's business concerns the first kind of his art. Dr. Campbell thinks it is asking too much of a dentist to require him to go through all the medical curriculum of a doctor to be able to do much in his art. This may be true, but the doctor seems to us to take too low an estimate of the capacity of human brains, if he assumes that, because practical dentistry "will require from three to seven years' time to learn," the student who spends this time for the mechanical drilling and filling cannot study anything in the meanwhile. He is not only able to do it, but even very lazy, if he does not spend at least half of this time in theoretical study. The advice to "let the dentist study medicine to the extent that it will subserve his purpose in his own profession, just as he would study chemistry, metallurgy, or any other branch of science or art," is rather dangerous. Medicine cannot be taken up in parts, unless it is a thorough training in the scientific foundation, and then leaving off other special fields, turning into dental specialities. As medicine consists far more in anatomy, physiology, pathology, than in prescriptions, etc., a dentist never will be an educated man without these branches. This pleading for special training before any shadow of the general principles underlying them is known, is dangerous, because it encourages that laziness to which we are all given, and for which we are glad to get any plausible excuse. But, on the other hand, he is right in not thinking it necessary for dentists to acquire the title, M. D. He uses a slight sophism in supposing a dentist to require seven years for his preparation, while a common doctor could do it in three years. Rather the opposite, doctor! Then, that talking about "good" dentists and "not good" dentists is so very vague, that in fairness it might better be omitted.

The *Dental Register* of February, 1882, opens with a paper read at the International Medical Congress at London, August, 1881, by Walter H. Coffin, F. C. S., which deserves careful reading. He speaks very highly of steel as the best material for regulating deformities, as far as springs are needed for this purpose. It seems that American doctors are somewhat afraid of it, though we do not know the exact

cause. They use all kind of combinations of gold and copper, none of which is as effective, easily accessible, and strong as simple, cheap steel. Dr. Walmsley gives very detailed hints as to microscopical preparations; most of them seem good to us. He rejects oil of turpentine on account of its "foul smell." We do not think this any objection, because to us and many others the oil does simply not smell foul. But, aside from that, we do not doubt that, with the directions given, one may prepare a house-fly most satisfactorily.

Items of Interest is a small dental paper, full of all kinds of useful information. As to the March number, 1882, we should like very much to ask the editor, before criticising, to read an article thoroughly, and not ascribe to us sayings which have no sense whatever. The editor, criticising on our article on Vital Force, says that the conclusion to which we came was: "Life is a circulation." For heaven's sake, do not believe that we thought only a moment of such a nonsense! Dr. Marshall H. Webb, of Lancaster, Pa., gives a long paper on filling a tooth. We need not say that the article is excellent. In an editorial the editor writes about "the Blood is the Life," evidently as a kind of reply to our article about vital forces. Now, blood is a substance, while life is a force, hence, how can blood be life? This is contrary to every logic; but if we put the proper logic into the little article we are astonished to find that the editor of the *Items of Interest* has the identical view about life that we have; that is, that the last factor of the many factors whose resultant is called "vital force," is circulation; for what else does it mean that "blood is life," if it is not circulation of the blood. Slowly but surely the "*Items of Interest*" accept the bioplasson theory. Many interesting little articles are given, most of them bright and good, but we cannot enter into them in detail.

Number 2 of the *Southern Dental Journal*, March, 1882, published at Atlanta, Georgia, contains some valuable original articles. One of them is a paper by H. E. Beach, D. D. S. It deals with the subject of the demands from dentists for proper performance of their duties. Very good, seems to us, this passage: "I say, and that with emphasis, that if the faculty of any college will confer degree of their institution on any man whom they know to be morally and professionally impotent, such an institution ought to have their charter repealed, or the trustees ought to secure a change in the faculty." The editorial department we consider slightly weaker in this number than the department of original communications. The editor's article on food adulterations is very much overdrawn. Having been in the

business of a chemist for quite a number of years, and employed by cities and courts, we cannot agree with the opinion of the author, that "pure sugars and milk are always unknown;" we never found sugar adulterated to any considerable extent. Water is all that is added to milk; we never found anything else. That "imported teas" are colored with chromate of lead, as the editor says, is not based upon facts. That "white earth constitutes three-quarters of the ingredients of bitartarate of potash," is astonishingly new to us; that "arsenic is used in making candies" is a startling assertion, without any backing whatever. Because, now and then, under particular circumstances, such substances have been discovered in food, there are a number of clamorers who let loose their fancy and speak in a general way, which is just as unscientific as it would be to conclude from one murderer being an Irishmen, that all murderers are Irishmen, or all Irishmen murderers.

The *Missouri Dental Journal* for March, 1882, contains as first article our sharply criticised article of E. S. Talbot; we wish every one who likes to view that paper of Dr. Talbot's in the true light, to read our article about it in our March number. We were then rather too mild than too severe.

OPERATING TABLE AND LABORATORY.

We have been using some of Dr. Meriam's "Sandpaper Disks," which he kindly sent us, and do not hesitate to say that they are a very valuable acquisition to our list of appliances. We are surprised at their durability, rapidity of execution, and adaptability to varied cases.

Why cannot something of the kind be made to use with "*crown* fillings?"

DEAR EDITORS: For the benefit of Dr. Parmele and others who desire to know how sandpaper disks are made, it may be said that at the April (N. Y.) Clinic, Dr. Watkins, of Montclair, N. J., exhibited sandpaper disks, shellac varnished, that he claimed were water-proof. He had devised a punch with a rubber core and central punch point. The prepared paper is placed on a hard, level board, the punch used, and a disk is the result, ready to be mounted on mandril. M. A.

It is not the polished or expert operator that will save the most teeth or do the greatest good in his profession, if he lacks the judgment to make a proper diagnosis of his case, or is a one-idea man.

E.

To remove labels from bottles, first wet the label with a little water, and then hold over a flame of a gas jet or spirit lamp for a minute or two. The heat produces a slight steam vapor which very readily loosens the label, saving a large amount of time.

"To Keep the Spittoon Odorless."—Throw the spittoon, stand and all, into the ash-barrel. Two or three little cups on the top of the cabinet are far more convenient and wholesome than a spittoon, and can be kept perfectly clean by proper care. "Cleanliness is godliness" (without potash).

T.

Will Dr. Parmele please tell us, through the Journal, more in detail his method of preparing and using "gutta-percha dissolved in eucalyptol," for root-fillings? Also if, in his opinion, cotton moistened in eucalyptus would not serve equally well for the same purpose? and, furthermore, if he has ever used the same in cases of abscess?

D. D. S.

In some cases the phosphoric acid used in the oxyphosphate filling becomes deliquesced or watery to an extent to impair its usefulness. It may be restored by placing the bottle uncorked in a sand-bath, and placed over a gentle heat for a short time, when the excess of moisture will be driven off. If, on cooling, it (solidifies) crystalizes, add a few drops of water, and it will soon become liquid again.

The engravers and watchmakers of Germany are said to harden their tools in sealing-wax. The tool is first brought to a white heat and then plunged into the wax. After an instant it is withdrawn, and the plunging is repeated until the steel is too cold to enter the wax. The advantages claimed for this method are that the steel becomes almost as hard as the diamond, and, when touched with a little oil or turpentine, is superior for engraving, and able to pierce the hardest metal. Will some dentist try this method and report?

If in mounting a set of teeth on celluloid, whether gum or plain, you allow the approximal surfaces to be in contact when you case up preparatory to pressing your plate, you will very likely find one or more of your teeth or blocks broken. E.

Iodide of zinc is recommended by Dr. Harlan, of Chicago, as a pain obtunder in excavating sensitive dentine; also for injection through fistulous tracks of alveolar abscesses, in the proportion of water, ℥ss.; iodide zinc, grs. xii. The same proportions are effective in treating pyorrhœa alveolaris, used on wooden point dipped into the solution. And almost any condition of gums depending upon chronic inflammatory causes is benefited by the local application of this form of zinc, used in different proportions.—*Southern Dental Journal.*

A good gutta-percha filling material for temporary fillings, or even quite serviceable ones, can easily be made in the following manner: In a common teacup (thick one preferred) place a portion of the common red gutta-percha which is used for base plates, also pulverized pumice stone, in proportion by weight about two parts of the former to one or more of the latter. Place over a heater till sufficiently warm to make it possible to thoroughly incorporate the two articles. The rounded end of a hard-wood stick, or the end of a common file-handle, will serve in the process. Remove the cup to the work-bench while kneading, as considerable strength is required. Avoid an unnecessarily high temperature. Finally, remove from the cup, and roll into a convenient form for use.

Having a case of very "sensitive dentine" to-day, the idea occurred to me to try nitrous oxide gas, *a la* Dr. Rich. My patient was a brave common sense young lady, who endured the pain incident upon preparation of the cavity with heroic determination; but, notwithstanding which, I think I should have failed to properly prepare it had I not tried the gas. Three or four rather full inspirations of the gas permitted me to complete the excavations without the least unpleasant sensation, requiring about ten minutes' time.

I need not say that my patient appreciated the effort and rejoiced in the result.

My impression was that I could have worked several moments longer, if necessary. I certainly could have done so with one or two inspirations more of the gas. S. T.

FILLING ROOTS.

In a practice of over thirty years, I have tried various modes, such as gold, "bone," gutta-percha, and shellac, or sandarach. I think it is more than ten years since I made shellac a constant root-filling. It has been more satisfactory than any other. Early in its experimentation, I tried this: An upper molar, with its three roots, was held upright so as to represent its position in the head. Cotton dipped in a thick alcoholic solution of shellac was placed in a decayed crown cavity, having pulp cavity open. The cotton was squeezed with a plugger, and an endeavor made to force the solution into the roots, the *ends* of the roots being sealed. The confined air resisted the entrance of the solution more or less, and less and less air being expelled *through* the solution, after a while I concluded that the solution had filled the roots. Then small fibers of cotton were forced gently into the root canals as far as easily attainable. The cavity of decay was closely packed with cotton and the solution. Now the tooth was put in a tumbler of water, and left to remain for one week. At the end of that time, the tooth was removed and examined. The cotton had become pretty hard, for the water had extracted the alcohol of the solution, and only gum-shellac and cotton were left to form the plug.

The roots were now cut with a file on one side down to the canals, on all three of the roots, exposing the canals for a quarter of an inch. The canals were found to be filled with nearly dry sandarach-gum, which had hardened there, and had run into and varnished the minutest hair-like canals of the roots.

Several experiments of this kind were made with various classes of teeth, and the results were so satisfactory that this mode of filling roots in the mouth became my regular practice. The results in the mouth have given the greatest satisfaction.

In a practical case, the roots should be freed from water or saliva by washing the roots repeatedly, at the same sitting, *with alcohol.* If water is left in the roots, the "solution" will not flow well, and the gum will be precipitated by the water and alcohol uniting in the roots, and then the water will stay there. Nothing but the "solution" and cotton should be in the pulp cavity and root canals, and then the free water or saliva of the mouth will extract the alcohol from remote portions of the solution.

It is probable that the water contained in the hard substance of the roots extracts a portion of the alcohol.

Even if a canal is not filled solid with the gum after having its alcohol removed, yet the sides of the canals are varnished, the pores filled, and thus strange fluids kept from the canals.

The results are highly satisfactory, and I should not write this if I did not wish the young men to commence a practice which yields so much satisfaction.

The pulp cavity should be prepared and treated in the usual manner, or, at least, in the best manner, before the filling of the roots. The killing of pulps and preparation of such teeth for filling is a subject big enough for a separate article. Sandarach solution is just as good as shellac. HENRY S. CHASE.

SOCIETIES.

PROCEEDINGS OF THE BROOKLYN (N. Y.) DENTAL SOCIETY, HELD MARCH 13, 1882.

The society voted to accept the offer of the Kings County Medical Society of an associate use of their library rooms; also voted money to subscribe for the several dental journals of this and other countries and purchase miscellaneous books for reference upon subjects pertaining to the interests of our specialty. It was stated that money and books were to be donated by members. This indicates a step in the right direction, as it secures an additional supply to the nucleus of a library already on hand. This move is in harmony with the signs of the times—*more knowledge;* our calling must be placed upon the plain of liberal education that characterizes other professions, and then the more generous hand, public opinion, will be given us. These are *facts*, and it is but wise to recognize them.

DR. BONWILL, of Philadelphia, was present at the clinic held monthly in the afternoon previous to the meeting in the evening—clinic at White's Depot; meeting, at Dr. A. H. Brockway's house. The Dr. gave a clinical lecture upon the history of the manufacturing of his porcelain crowns, to their present status, and the modus operandi of setting them. Also he exhibited his twenty-seven per cent. of gold amalgam, his engine-impressed nut or hand-piece for grasping the points, and his mechanical mallet attached to the engine. This was regarded with particular favor. It was demonstrated upon a filling by

several, and expressions indicated the belief that it would prove a strong aid to the electric engine of his invention. If so, the price—twelve dollars—brings it nearer the small purse of many worthy practitioners who cannot yet afford about sixty dollars for the other, and the difficulty of the battery is set aside. This mallet certainly did work nicely, the blow being easily regulated by the speed of the engine. It can be readily attached to other engines. Either of these is certainly a GREAT advance in perfection of packing, labor, and time-saving operations.

Under Incidents of Office Practice, Dr. Crandal called attention to a case in hand of a patient about sixty-five years old, with worn portions of six scattering lower teeth, on the labial side to the gum; the lingual, left about an eighth of an inch above, healthy and very firm. He asked, what should be done to supply a fixture of the greatest utility? Some said make a plate that would not rest on these teeth; one said build up with gold and Bonwill's crowns and fill the space with a plate; another had had hundreds of similar cases, but never hesitated to let the plate rest on the portions of teeth. Dr. Crandal said he had decided to make a plate and let it rest on these teeth and build up with portions of porcelain teeth, elongating the natural one, or, as he would call it, an extension of them—these attached to the plate with the other portions of the piece. He said an experience in his own mouth had led him to this decision, he having his anterior lower teeth much worn down, and were very sensitive at times. Annoying him much, he had constructed a piece and so fitted teeth on the tops of these, extending their length, and had used them some two years with much satisfaction. He felt for him they were of more utility than to have them built up with gold, considering the inconvenience he would have to submit to in having it done, etc. He said the patient referred to was very good-natured and generous, but for some reason had failed to put money in his purse; and he wished to do for him that which would be of use to him and within his means; thought it was our duty to consider these little points in the interest of those who seek our services.

ABSTRACT OF THE PAPER READ BY DR. G. A. MILLS.

MR. PRESIDENT: At the last meeting of this society our attention was called to a subject of more than minor importance. That the memory may be revived, I repeat the subject: "The Proper Care of the Oral Cavity."

I commend the effort of Dr. Abbott, but the importance of such a subject, in my estimation, is great. I went away from the meeting feeling a keen disappointment that, aside from Dr. Abbott's paper, the subject was left unnoticed. It may be asked why I did not defend such a paper. I am aware that some will object to my defending a subject that to them needs no defense. No one doubts the duty and advisability of a proper care of the oral cavity. Now, if this is so, the larger number in the profession fail to either prove it by their practices, or their lack of requisite knowledge to do it. The neglect in this direction is a crying shame to our calling. I am fully aware of the arguments (if they may be called such) that are offered against the views I have expressed in societies and published in journals, and that have resulted in many letters of commendation of my views—that thoroughness under the earnest desire for requisite knowledge to perform the service could alone prove the *efficiency* of our calling.

To undertake to defend the "easy-go-way" of doing a little here and there, and at the same time convince the people that our mission is to make the teeth salvable, is a thing impossible; but to prove that by putting the oral cavity into a state of health does make the teeth salvable—giving comfort and usefulness to these organs, far beyond anything of former times, gives cheer that the time will come when it will be the general practice, instead of, as it now is, the exception.

I am of the opinion that not a few practitioners are deterred from allying themselves ever to their convictions because of the financial aspect of this question, and I am free to acknowledge this to be the "*bete noire*" of our calling. We labor under great disadvantage because we do not have the generous hand of public favor, as do the callings of divinity, law and medicine. Many a one has had his blood tingle by being ostracised as a *dentist;* and we have not outlived such things and conditions yet, though happily a change is coming; it is not as bad as it was formerly. It will never be wholly changed until our profession is based upon a more liberal education, that has so long characterized these other named professions. It is of no use to disguise the fact that our calling had a humble origin, as surgery did. Surgery, as a profession, stands second to none, and its followers rank the highest in the social scale. The time will certainly come when our branch of the healing art will rank as high. Such hope should inspire all true lovers of our calling to leave nothing undone to that end. I will not report any of my views of what I consider the proper care of the oral cavity—they being obtainable to those who read our journals.

I want to say that my own experience and observation has taught me that to be faithful, as I understand it, has cost me struggles in body, mind and finance, and not yet a very large percentage of appreciation.

I will explain a financial aspect as well as a grossly negligent aspect of our calling. A patient calls and wishes to have a tooth filled. They are seated in the chair; the tooth is indicated by the patient; the operator sets himself to work at once, and prepares the cavity for filling; nothing particular is said of the nature of the operation, so, if it be a simple filling, it is soon completed. The fee is paid, and the patient goes out no more intelligent about the conditions of his teeth and their surroundings than when he entered the office. Another may call for a similar operation, and may go out with no further knowledge than the first had, excepting that he has been informed that several more teeth need attention in a "short time"—this "short time" being probably when a twinge of pain is felt. Bear in mind that the majority of our patients call to have their *teeth* cared for, not in the least comprehending the subject we are considering. To illustrate:

A patent suffering with a tooth with inflammation around it; it is quite loose. A surface investigation satisfies the operator that it is a case of trouble about the socket—cause, tartar. The tooth meets with another kind of Tartar, and out it comes. By way of conversation, the operator says: "You are likely to lose all of your teeth in the same way; it is only a matter of time." Thus enlightend, the patient goes out. A patient calls at another office and wishes a tooth filled. A general glance exhibits the need of much science to do justice to the patient; his attention is called to the fact; he is told that he has had much good work done so far as it goes, but that there are many cavities needing attention. His reply is, "Yes, I suppose so. I have always been told so, and I go every three months and have them looked after." Attention is called to the unhealthy condition of the mouth. Gums badly congested; considerable recession; pus readily pressed from the gums, etc. This is the first time his attention has been called to these facts, but has noticed how easily his gums bleed when brushed, etc. Two or three of his teeth have at times been sore, and wants to know what can be done, and is told to have his mouth placed in complete order, all cavities filled; all deposits removed that are interfering with health of the mouth, and in the end have a clean, sweet mouth, and know the highest value of our services. This patient may accept your reasoning, believing it sound

and intelligent, and not accept the figures of cost for its accomplishment. He asks, "What will it cost?" The reply is, "This service will require anywhere from sixty to seventy-five hours. Suppose we place the charge per hour at the reasonable figure of five dollars. You can easily see something what the aggregate will be." This patient, like very many, may accept your prices and teachings as equally reasonable, but many will accept the latter and not the former, believing the prices *above* the general average, when they are in reality on the same basis, or even lower.

Is there no way out of the difficulty? I shall leave it for those who espouse the doctrine of intelligent faithfulness. To the young men I would say, try and solve this problem for yourselves. You must meet these facts face to face, of absolute faithfulness and its just compensation. You must compare and reflect, if you value the experiences of those who go before you, and be assured that for every effort earnestly made toward furthering this great work, the pathway will be much the easier for you.

DISCUSSION.

Dr. O. E. Hill said the paper led them to think (inferentially) that we were rather uncharitable towards each other, which he rather guessed was about the truth; he thought he was himself, and had been that very day. A person had come into his hands having had a good deal of work which he had paid a fabulous price for—the work upon the back was with gold, and the front with gutta-percha, and saving the teeth—but the gold not. All of the latter he had examined were failing. He thought we saw these extreme cases of price, etc., and perhaps, sometimes, bore down rather hard. Said the paper was a good one, with many good suggestions; he believed that the subject which was principally noticed in the paper, "The Proper Care of the Oral Cavity," was not enough considered; certainly the importance of it. He did not himself come up to the appreciation of its value, nor did he charge enough for what he did do. He said very much could be done in assisting nature to a better condition of health in the oral cavity. He paid a high tribute to Dr. Riggs for the part he had taken in this matter; said the credit was due to him that the greater interest had been created in the last decade, and that the *B. D. S.* had cause for gratitude for the kindly interest he had manifested in his visit several years ago, when the infirmary was in active operation, and there demonstrated his skill. He knew that much could be done to improve the disturbed conditions of the gums, that were

so commonly seen, although he had seen cases that had been pronounced cured that were failures.

DR. C. D. COOK said there was not much known about this disease, although we had had some quite able articles upon the subject. He saw cases where there did not seem any deposits, but a good deal of looseness about the gums and quite a copious discharge. He did not feel so hopeful over these as those where the deposits were.

DR. FRY said he had a case lately, to which he had applied himself with a great deal of assiduousness, had dressed from day to day with zinc chloride, and pushed it up under the gums with a thin dogwood stick, so that about the sixth day he could see indications of decided improvement, and he hoped, by following it up, and getting away the filthy accumulations, he would get a good degree of firmness and get the teeth into a state of control and usefulness, that had been for a long time associated with discomfort and disease.

DR. BROCKWAY served a fine collation, that was approved by all present.

AN EVENING WITH THE MICROSCOPE is very instructive and pleasant to those who may enjoy the privileges of such an entertainment. Any subject that may be under investigation can be popularized so as to awaken the liveliest interest in those who may be wholly uninitiated. The meeting that it is the object of this notice to report, was popular in character, and the distinctive feature of interest to our readers was the exhibition of microscopes, which we propose to describe for their benefit. The meeting was held March 30, last, by gentlemen interested in the subject of microscopy, at the rooms of Dr. A. M. Ross, Chicopee. Eleven microscopes were exhibited, three of which were new, and were sent by the makers for exhibition. A stand, styled the "Achme," was sent by J. W. Queen & Co., of Philadelphia. The price of this stand was $25. Two stands were sent by the Bausch & Lomb Optical Co., of Rochester—one styled the "Model," the other the "Investigator." The price of the former, with one eye-piece, was $22; the latter, with one eye-piece, $45. The "Model" is a most beautiful stand—the best for the price in the market. The "Investigator" has every feature of excellence possessed by the highest-priced monocular stands, and at the risk of having our commendation of it construed into a "card" for the makers, we urge dentists and others desiring microscopes to write this firm for catalogues, etc.

The meeting was informal, and was attended by many professional men—physicians, pharmacists and dentists. Prof. Pillsbury, of Springfield, exhibited a large and beautiful collection of mounted botanical objects. Mr. J. D. White, of Chicopee, prepared his large Bulloch binocular microscope with polarizor, to show starch grains, crystals, diatoms, etc. Mr. David Folsom, of Chicopee, a man rarely gifted in entomological science, brought in his best preparations of insect parts. Dr. C. P. Hooker, of Springfield, took charge of specimens relating to general physiological and pathological histology. Dr. Ross showed specimens of tooth structure, teeth in situ, and specimens showing the development of teeth, some of which were of his own preparation, and some contributed by Dr. J. L. Williams, of North Vassalboro, Me. Mr. C. W. Eddy, of Ware, brought his home-made microscope—a fine instrument—a beautiful collection of specimens, and some fine photographs of objects for projection by oxy-calcium light on a screen. The idea of having these meetings is to popularize this comparatively little known instrument of education, the microscope, and it is earnestly hoped that there may be more of such meetings in the near future.

The nineteenth semi-annual meeting of the Merrimac Valley Dental Society will be held at the Parker House, Boston, Mass., Thursday and Friday, May 4 and 5, 1882. It is intended to make this meeting one of unusual interest.

Per Order Executive Committee,

ALBION M. DUDLEY, Secretary.

THE CONNECTICUT VALLEY DENTAL SOCIETY will hold its semi-annual meeting at Amherst, Mass., June 29 and 30, 1882. The various Section Committees are arranging most interesting reports. An essay by Dr. J. L. Williams, of North Vassalboro, Me., is promised, entitled "Studies in the Pathological Histology of the Teeth and Contiguous Parts." This paper to be illustrated by a stereopticon. Arrangments are perfecting for the exhibition of a few microscopes.

Per order of Executive Committee,

A. M. Ross, Secretary.

The thirty-third annual meeting of the American Medical Association will be held at St. Paul, Minnesota, commencing Tuesday, June 6, and lasting four days. A Section on Dentistry was formed in this Association at it its last meeting, and medically educated dentists were recognized as specialists in medical science. All medical men of the regular school, practicing the specialty of dental surgery, are most cordially invited to procure credentials from their local medical societies, and join us at St. Paul. All railroads furnish reduced rates to all those members who wish to attend. "A member desiring to read a paper before any Section should forward the paper, or its title and length (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements, at least one month before the meeting." (By-laws.)

TRUMAN W. BROPHY,
Sec. Section on Dentistry, Am. Med. As.

REVIEW OF THE REPORT OF THE BROOKLYN DENTAL SOCIETY IN THE MARCH (1882) DENTAL JAIRUS.

Personally, I am pleased to see the Brooklyn Dental Society reported. I believe in gathering the *golden* grains that drip from the lips of those who think both theoretically and practically. No body of men in our calling can associate together and discuss subjects allied to their calling but what there will be a product worth gleaning, and which will become, according to taste and need, food for the hungry ones. Yet many things come up in these bodies wholly irrelevant, and they, too, often get into the journals at the expense of valuable matter left out. This is noticeable in this report of the *B. D. S.* The subject before the meeting was interesting, and many outside, who are interested, are waiting and watching for instruction upon a subject so allied to indefinite perplexities. In this discussion, *slow movement was pitted against the rapid.* The report shows that a partisan spirit controlled the one who made it, or else the reporter had not brains enough to see the point made or designed to be made.

It will be seen that Dr. Hill criticises Dr. Atkinson, by saying that he "*deprecated decidedly*" his remarks, that "*they were irrelevant*" and "*all wrong.*" Now what does the reader know by this report of Dr. A.'s remarks? Anything from what Dr. Hill says? The inference is, from what is said a little further on, that Dr. Hill has used both

devices, aud characterized Dr. A.'s as "*nonsensical*," etc.; and that *he* "had used one of Dr. F.'s devices, and accomplished *what could not have been done by any other plan*." Well, now who appears in this discussion as more *nonsensical* than does Dr. Hill?

The reporter places Dr. Hill in an unpleasant position, for no intelligent or fair-minded man is going to form any conclusion from such a report as that. Some will pertinently ask, "Why is it that Dr. A.'s remarks do not appear in the report, so that one may sum up the whole intelligently?" Particularly those who do not know Dr. H.'s *real ability*, and who do know about Dr. A.'s, might hesitate about accepting the former's conclusions. Please notice what seems to be the *reporter's* remarks, near the top of page 79:

"Dr. Atkinson, in his usual demonstrative style, etc." Read on, until Dr. Jarvie's remarks come in: How does such a report strike a sensible man? My first impression was, that the report was by a dentist, but, on second thought, I said no *dentist* would use such *terms*. I think some fellow got in without a card, and it may pass on its merits as valueless.

If the profession as a whole could look into 41 East 9th street, and feel the spirit of him, who, never faltering, never relaxing in his purpose day nor night, and who has never failed to respond to the pull of the latch-string, they would see that his constancy has not ended in results to be characterized as they are in this report under criticism in the Jairus. In the closing remarks by Dr. Farrar, "*he* agreed with Dr. Hill in the irrelevancy of Dr. A.'s histological remarks." Very likely, but why did not the reporter give Dr. A.'s remarks? Histology happens to be an important factor these days, and not a little energy is being displayed to get hold of the latest and best on this subject. Evidently principles were discussed by Dr. A., but the reporter cut them.

This review will apply to very many of the society reports given in our journals, and, for the sake of progress as well as of truth, let us have them in a less *garbled* form.

The *B. D. S.* is a society of some self-respect, and it is due all such societies that the reports of their proceedings be just.

REVIEWER.

CHEMICAL FACTS HINTS AND QUERIES.

Will the New England Journal please tell us what "*Iodoform*" is, and what its supposed therapeutical effect? TWITCHELL.

Iodoform (CHI_3) is the substance formed, when iodine acts on common alcohol in presence of an alkali, like caustic or carbonate of soda, etc. Many other substances, treated thus, give iodoform. It contains in 100 parts:

Iodine, 96.6;
Carbon, 3.1;
Hydrogen, 0.3.

It crystallizes in yellow scales, easily soluble in alcohol and ether, but almost insoluble in water. At 120 degress C., (248 degrees F.), it melts and is decomposed at higher temperatures. In its action it works like iodine freed from its obnoxious properties; it is a caustic of low but continued intensity, hence admirable for chronic ulcers, like decaying teeth, etc. Its little solubility in water prevent its being rapidly carried into the circulation before its local effects have been experienced.

BIBLIOGRAPHICAL.

The *New England Medical Monthly* is a very fine monthly, clearly gotten up and standing on scientific grounds. Our readers will see by the number of selections we give in this number from its columns, that it is full of fine reading matter, just as interesting for dentists as for oculists and other special doctors.

Quiz-Questions. Course on Dental Pathology, Philadelphia Dental College. Prof. J. Foster Flagg, D. D. S. Answered by William C. Foulks, D. D. S., President of the Quiz Association of the Philadelphia Dental College, Philadelphia. George A. Fowler & Co., 2228 Ridge Avenue, 1882. This is the title-page of a small book of very extensive contents. The cover is neatly pressed and the questions in the book are quite sensible. We will give a selection of pathological quiz-answers in one of our next numbers.

Manual of Dental Surgery and Pathology, by Alfred Coleman, L. R. C. P., revised and adapted by Thos. C. Stellwagen, M. A., M. D., D. D. S., published at Philadelphia by Henry C. Lea & Son & Co., is a fine volume, but our space for this number is already taken up, so we better give it large room in our next one.